

REMARKS

Claims 1, 4, 6, 7, 11 and 20 have been amended. Support for the amendments may be found on pages 10-11 of the specification. No new matter has been added. Claims 1-20 are currently pending in the present application. Reexamination and reconsideration of the application are respectfully requested.

REJECTION OF CLAIMS 1-8, 11, 12, 16-18 UNDER 35 U.S.C. 102

Claims 1-8, 11, 12, 16-18 are rejected under 35 U.S.C. 102(b) for the reasons set forth on pages 2-5 of the Action. Specifically, claims 1-8, 11, 12, 16-18 are rejected under 35 U.S.C. 102(b) as being unpatentable over Katoh et al. (U.S. Pat. No. 5,796,430) (hereinafter referred to as "Katoh" or "Katoh reference").

The rejections under 35 U.S.C. 102(b) are respectfully traversed, at least insofar as applied to the amended claims, and reconsideration and reexamination of the application is respectfully requested for the reasons set forth herein below.

The Federal Circuit has ruled, "Under 35 U.S.C. §102, anticipation requires that each and every element of the claimed invention be disclosed in the prior art. . . . In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." Akzo N.V. v. United States Int'l Trade Comm'n, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986), cert. denied, 482 U.S. 909 (1987). [emphasis added.]

Furthermore, the Federal Circuit has held, "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." W.L.

Gore & Assocs. v. Garlock, Inc., 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). [emphasis added.]

Pages 2 to 5 of the Action identify those elements of the Katoh reference that purportedly describe or otherwise anticipate the elements as claimed. Specifically, the Office Action asserts that circuits 103, 104, 107 and 110 of FIG.1, step 208 of FIG. 2, FIGS. 5-8, col. 2, lines 14-21, and col. 3, lines 59-63; col. 4, lines 25-36, 37-53; col. 5, lines 14-15, 16-18, 21-29, 42-49, 50-51 and other portions of the Katoh reference teach the method and apparatus as claimed.

It is respectfully submitted that the Katoh reference fails to teach or suggest each and every element of the method and apparatus as claimed. For example, regarding amended independent claim 1, the Katoh reference fails to teach or suggest inter alia the following claim limitations: “wherein the method eliminates one of artifacts that stem from inconsistent detection of defective pixel from frame to frame and artifacts that stem from inconsistent replacement of defective pixels.” The “white spot noise correction circuit 107” of Katoh does not fairly teach or suggest the consistent detection step as claimed because the “white spot noise correction circuit 107” of Katoh appears to perform the detection for each new frame, which can lead to different pixels being identified as defective for different frames. As noted in the Background section of the current application (page 4, line 7-23), this inconsistent detection of defective pixels can cause undesirable artifacts. Moreover, steps 203 to 205 of FIG. 2, steps 1204 to 1206 of FIG. 12, steps 1506 and 1507 of FIG. 15, and steps 1603 and 1604 of FIG. 16 reinforce the above-noted interpretation that the Katoh apparatus does not employ fixed

defective pixel locations from frame to frame, but instead performs detection of defective pixels for each frame or at each power-up/power-down.

Furthermore, regarding amended independent claim 11, the Katoh reference fails to teach or suggest *inter alia* the following claim limitations: “wherein the defective pixel correction mechanism and the defective pixel detection mechanism eliminate one of artifacts that stem from inconsistent detection of defective pixel from frame to frame and artifacts that stem from inconsistent replacement of defective pixels.” For example, it appears that Katoh uses circuit 107 to perform a variety of different detection schemes, as set forth and described in FIGS. 2, 12, 15 and 16, that can vary from frame to frame or from one power-up/power-down to another. Moreover, Katoh appears to employ a variety of different correction schemes, as set forth and described in FIGS. 7, 10 and 13, that can lead to inconsistent defective pixel replacement. The inconsistent defective pixel detection and correction, as advanced previously, may cause undesirable artifacts (e.g., artifacts apparent from viewing multiple frames).

It is noted that the dependent claims incorporate all the limitations of the independent claims. Furthermore, the dependent claims also add additional limitations, thereby making the dependent claims *a fortiori* and independently patentable over the cited references.

For example, it is respectfully submitted that the Katoh reference, whether alone or in combination, fails to teach or suggest *inter alia* the following claim limitations: “employing a two step delay circuit to provide a replacement pixel value for the

defective current pixel; wherein the two step delay circuit is reset to zero at the beginning of every row,” as claimed in claim 7. Elements 1001 and 1002 of FIG. 10 of Katoh are cited as teaching the claimed limitation.

However, it is respectfully submitted that D flip-flops 1001 to 1004, switch 1005, adding circuit 1006 and dividing circuit 1007, reduces a data value into $\frac{1}{2}$ (see, col. 5, lines 66-67 and col. 6, lines 1 to 7). Katoh further describes the function of these circuits as replacing A_12 (which is defective) with the average of a previous value A_11 and a future value A_13. As can be appreciated, Katoh circuits 1001 – 1007 are very different in structure and operation than the circuit as claimed. Consequently, it is respectfully submitted that Katoh does not fairly teach or suggest providing a previous pixel as a consistent replacement pixel value as claimed. Accordingly, it is respectfully requested that the claim rejections under 35 U.S.C. Section 102(b) be withdrawn.

REJECTION OF CLAIM 9 UNDER 35 U.S.C. 103(a)

Claim 9 is rejected under 35 U.S.C. 103 for the reasons set forth on page 6 of the Action. Specifically, claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. (U.S. Pat. No. 5,796,430) (hereinafter referred to as “Katoh” or “Katoh reference”) in view of Balz et al. (U.S. Pat. No. 5,929,865) (hereinafter referred to as “Balz” or “Balz reference”).

The Action states that Katoh discloses the claimed invention, but does not disclose “storing a plurality of defective pixel locations in a sorted order wherein a search of the table to determine if a current pixel location is a defective pixel location is obviated,” as claimed.

The Action then cites the Balz reference for teaching “for storing pixels in a sorted order.” (col. 4, lines 20 to 23) The Action further states that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine Katoh and Balz and to store the defective pixels in a sorted order for the benefit of decreasing search time.

The rejections under 35 U.S.C. 103 are respectfully traversed, at least insofar as applied to the amended claims, and reconsideration and reexamination of the application is respectfully requested for the reasons set forth hereinbelow. Moreover, this combination is contested as improper for the reasons advanced below. However, even if this combination were proper, which is not conceded, the resulting combination would still fail to teach or suggest the claimed invention.

It is respectfully submitted that the Katoh reference, whether alone or in combination with the Balz reference, fails to teach or suggest inter alia the claim limitations discussed previously with respect to claims 1 and 11. Accordingly, it is respectfully requested that the rejection of claim 9 under 35 U.S.C. 103(a) be withdrawn.

REJECTION OF CLAIMS 13-15 UNDER 35 U.S.C. 103(a)

Claims 13-15 are rejected under 35 U.S.C. 103 for the reasons set forth on pages 6-8 of the Action. Specifically, claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. (U.S. Pat. No. 5,796,430) (hereinafter referred to as “Katoh” or “Katoh reference”) in view of Dong (U.S. Pat. No. 6,665,009) (hereinafter referred to as “Dong” or “Dong reference”).

The Action states that Katoh discloses the claimed invention, but does not disclose “an index manager,” as claimed. The Action then cites the Dong reference for teaching “the index manager”. The Action further states that it would have been obvious at the time the invention was made to a person having ordinary skill in the art to combine elements from the Katoh system and elements from the Dong system to arrive at the claimed invention.

The rejections under 35 U.S.C. 103 are respectfully traversed, at least insofar as applied to the new and amended claims, and reconsideration and reexamination of the application is respectfully requested for the reasons set forth hereinbelow. Moreover, this combination is contested as improper for the reasons advanced below. However, even if this combination were proper, which is not conceded, the resulting combination would still fail to teach or suggest the claimed invention. It is respectfully submitted that the Katoh reference, whether alone or in combination with the Dong reference, fails to teach or suggest *inter alia* the claim limitations discussed previously with respect to claims 1 and 11.

Furthermore, it is respectfully submitted that the cited references (e.g., Katoh, Balz, and Dong) are improperly combined. It appears that the Action uses improper hindsight to selectively pick elements from Katoh, elements from Balz, or elements from Dong to arrive at the claimed invention. Specifically, it appears that the current patent application has been improperly used as a basis for the motivation to combine or modify the components selected from Katoh, Balz and Dong to arrive at the claimed invention. Stated differently, the proposed combination of the cited references appear

to be based on hindsight since the cited references do not teach or suggest a motivation to combine the respective elements of each reference in the manner proposed by the Action.

The Federal Circuit has held, “It is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated, “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.” (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)), *In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992). [emphasis added.]

Furthermore, the Federal Circuit has held, “The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself.” *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1446 (Fed. Cir. 1992). Accordingly, it is respectfully requested that the rejection of claims 9, 13-15 and 20 under 35 U.S.C. 103(a) be withdrawn.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh for the reasons set forth on page 8 of the Action. In response, it is respectfully

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submitted that claim 20 recites limitations that are not disclosed by the Katoh reference.

For example, Katoh fails to teach or suggest

a defective pixel detection mechanism that employs a look-up table with defective pixel locations for providing a determination of whether a pixel is defective or non-defective; wherein the defective pixel locations do not vary from frame to frame; and a defective pixel correction mechanism coupled to the defective pixel detection mechanism that employs a consistent replacement choice facility for providing a previous consistent replacement pixel value in the same frame, on the same row, and a predetermined number of pixels from the current pixel location as a replacement value, and a replacement unit for replacing the defective pixel value with the consistent replacement pixel value.

For all the reasons advanced above, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the pending claims are requested, and allowance is earnestly solicited at an early date. The Examiner is invited to telephone the undersigned if the Examiner has any suggestions, thoughts or comments, which might expedite the prosecution of this case.

Respectfully submitted,



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Dec. 27, 2004
(Date)